UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,787	12/01/2003	Gianluca Paladini	2002P19673 US01	1913

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EXAMINER
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ART UNIT	PAPER NUMBER
2628	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Advisory Action **_Before the Filing of an Appeal Brief_**	10/724,787	PALADINI, GIANLUCA
	Examiner	Art Unit	
	AARON M. RICHER	2628	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED <u>18 August 2008</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

   a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.

   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because
   (a)☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b)☐ They raise the issue of new matter (see NOTE below);
   (c)☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d)☒ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a).)

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
    See Continuation Sheet.

12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

13. ☐ Other: _____.

/Kee M Tung/
Supervisory Patent Examiner, Art Unit 2628

U.S. Patent and Trademark Office
PTOL-303 (Rev. 08-06) — Advisory Action Before the Filing of an Appeal Brief — Part of Paper No. 20080911

 Continuation of 3. NOTE: Claims 28 and 29 have been added, but no claims have been cancelled. Further, the new claims recite limitations of avoiding scan conversion of volume data that does not contribute to a final volume rendered image, which appears to require new search, or, at the very least, further consideration of the references used in the Final Rejection .

 Continuation of 11. does NOT place the application in condition for allowance because: As to claim 1, applicant argues that Halmann does not disclose structure of the lookup table, and therefore likely has interpolation values that correspond to particular coordinates, and would not have a Cartesian output, given a polar input. Examiner notes that even if interpolation is used, and only particular coordinates were used in the lookup table, these particular coordinates would still be able to be converted to Cartesian, and so the table would be reversible.

As to claim 3, applicant argues that Halmann does not determine coordinates of interest. However, col. 8, lines 4-9 clearly describe an area of interest, which is displayed, and has coordinates, Therefore this reads on display coordinates of interest.

As to claim 5, applicant argues that since rendering and scan conversion are separate in most inventions, the Halmann reference does not disclose coordinates of interest input to the LUT that correspond to rays. Examiner notes that the volume rendering module is said to "produce an image for display" and that there is no way to do this if the original coordinates are polar rather than Cartesian. Therefore, some sort of scan conversion must take place.

As to claim 11, applicant argues that GPU is a term of art and that examiner is applying undue breadth to the term. However, applicant has not shown any evidence, intrinsic to, or outside of, applicant's specification, that supports applicant's interpretation of the term. Therefore, examiner must continue to use a broad definition of "GPU" as any unit that processes graphics.

As to claim 15, applicant argues that Halmann discloses starting with polar coordinates and interpolating display coordinates, rather than ouptutting interpolated polar coordinates. As to the output of polar coordinates, see the explanation in regard to claim 1, which shows that the Halmann reference lookup table can be looked at as outputting either polar or Cartesian. Also, there is nothing in the reference limiting interpolation to display coordinates. The reference simply says that interpolation is used, and so one skilled in the art would read that as using interpolation in either coordinate system.

As to claim 26, see the explanation in regard to claim 5.

As to claims 6 and 19, applicant argues that the RGBA system of Okerlund is not compatible with the CPUs of Halmann, since this would not provide greater speed as stated by examiner, because Okerlund's speed supposedly comes from the fact that Okerlund uses dedicated hardware. Examiner notes that the increased speed is actually related to the fact that a decimated volume is used, and since Halmann also deals with volumes, the methods appear compatible.

As to claims 9 and 22, applicant argues that a new lookup table would be for a new plane, and not "across planes". Examiner notes that if one has a relationship defined on one plane, and then another, this would read on a relationship that changes/crosses from one plane to the next, and therefore goes "across planes".

As to claim 12, applicant argues that the Boolean flag and Integer Sum are shown as important in the specification, and that typical scan conversion would not use such variables. Examiner notes that the specification does describe the use of the variables but does not explain why they are important to use instead of other variables. Examiner agrees that such variables are not used in typical scan conversion, but that does not support applicant's conclusion that they are important and not a simple design choice.

As to claims 13 and 25, applicant argues that a flag when end of data is reached is not the same as a flag that indicates location. Examiner disagrees with this conclusion, noting that a flag determining whether the end of a piece of data, such as a line or column, has been reached is very much the same as a flag determining that a location, such as a line or cloumn, is out of some given data range.